

# Notes

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## Introduction

1. Quoted by Marshal of the Soviet Union K. A. Meretskov in his memoir, *Na sluzhbe narodu* [In service to the people] (Moscow: Voenizdat, 1983), 373, hereafter cited as Meretskov, *Na sluzhbe*.
2. See, for example, S. Golikov, *Vydaiushchiesia pobedy Sovetskoi Armii v Velikoi Otechestvennoi voine* [The greatest victories of the Soviet Army in the Great Patriotic War] (Moscow: Gosudarstvennoe izdatel'stvo politicheskoi literatury, 1954), 198–201.
3. See, for example, V. K. Shamshurov, *Inzhenernoe obespechenie boia v osobykh usloviakh* [Engineer support of combat in special conditions] (Moscow: Voenizdat, 1985), 192–234; and S. N. Dudarev and B. V. Shipov, *Artilleriia v osobykh usloviakh* [Artillery in special conditions] (Moscow: Voenizdat, 1970), 85–119.
4. Brian Garfield, *The Thousand Mile War: World War II in Alaska and the Aleutians* (Garden City, NY: Doubleday and Co., 1969), chaps. 16 and 17.
5. See Richard Goldhurst, *The Midnight War: The American Intervention in Russia, 1918–1920* (New York: McGraw-Hill Book Co., 1978).
6. Edward M. Coffman, "The Intervention in Russia, 1918–1921," *Military Review* 68 (September 1988):60–71.
7. See, for example, Allen F. Chew, *Fighting the Russians in Winter: Three Case Studies*, Leavenworth Papers no. 5 (Fort Leavenworth, KS: Combat Studies Institute, U.S. Army Command and General Staff College, December 1981), 7–19.
8. U.S. Department of the Army, Field Manual 100–5, *Operations* (Washington, DC, May 1986), 84–85.
9. U.S. Department of the Army, Field Manual 90–11, *Cold Weather Operations*, Preliminary Draft (Fort Leavenworth, KS: Doctrinal Literature Management Office, U.S. Army Command and General Staff College, 30 November 1988).
10. Dennis M. Egan and David W. Orr, "Sea Control in the Arctic: A Soviet Perspective," *Naval War College Review* 61 (Winter 1988):51–80.
11. Carl von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 170–71.
12. U. S. Department of the Army, Pamphlet no. 20–271, *The German Northern Theater of Operations, 1940–1945*, by Earl F. Ziemke (Washington, DC: U.S. Government Printing Office, 1959), 303–8, hereafter cited as DA Pam 20–271.
13. Earl F. Ziemke, *Stalingrad to Berlin: The German Defeat in the East*, Army Historical

Series (Washington, DC: Office of the Chief of Military History, United States Army, 1968), 397—401.

14. S. Mikulskii and M. Absaliyamov, *Nastupatel'nye boi 99-go i 31-go strelkovykh korpusov v Zapoliar'e (Oktiabr' 1944g)* [Offensive battles of the 99th and 31st Rifle Corps in the polar region (October 1944)] (Moscow: Voenizdat, 1959), hereafter cited as Mikulskii and Absaliyamov, *Nastupatel'nye boi*.
15. Nikolai M. Rumiantsev, *Razgrom vraga v Zapoliare (1941—1944gg): Voenno-istoricheskii ocherk* [The defeat of the enemy in the polar region (1941—1944): A military-historical outline] (Moscow: Voenizdat, 1963), hereafter cited as Rumiantsev, *Razgrom vraga*.
16. Peter DeLeon, "Emerging Security Considerations for NATO's Northern Flank," *RUSI, Journal of the Royal United Services Institute of Defence Studies* 130 (June 1985):35; the journal is hereafter cited as *RUSI*. See also General Fredrik Bull-Hansen, "Norway, NATO's Strategic Pivot?," *RUSI* 132 (September 1987):13—18; and Sir Geoffrey Howlett, "Concepts and Future Capabilities in NATO's Northern Region," *RUSI* 133 (Autumn 1988):13—18.

## Chapter 1

1. M. I. Semiriaga, ed., *Istoriia vtoroi mirovoi voiny 1939—1945* [History of the Second World War, 1939—1945] (Moscow: Voenizdat, 1978), 9:19, hereafter cited as Semiriaga, ed., *Istoriia*.
2. Sergei M. Shtemenko, *The Soviet General Staff at War, 1941—1945* (Moscow: Progress Publishers, 1986), 2:372—77, hereafter cited as Shtemenko, *Soviet General Staff*.
3. P. N. Pospelov, ed., *Great Patriotic War of the Soviet Union, 1941—1945* (Moscow: Progress Publishers, 1974), 258—60.
4. Waldemar Erfurth, "The Last Finnish War (1941—1944)," *Foreign Military Studies* no. MS C-073 (Historical Division, U.S. Army, Europe, 1952), 34, hereafter cited as MS C-073. Erfurth's study was published in German under the title *Der Finnische Krieg, 1941—1944* (Wiesbaden/Munich: Limes-Verlag, 1950). See also Alex Buchner, "Attack in the Tundra," *Military Review* 36 (April 1956):98—109.
5. The best account in English of the activities of the German Army in this theater is DA Pam 20—271. See also U.S. Department of the Army, Pamphlet no. 20—269, *Small Unit Actions During the German Campaign in Russia* (Washington, DC: U.S. Government Printing Office, July 1953), chap. 4.
6. For a detailed explanation of Operation Birke, see DA Pam 20—271, 276—78, and chap. 14.
7. *Ibid.* 300—302.
8. "The Petsamo Region," *Geographical Review* 34 (July 1944):409. Tundra is defined in *Webster's Ninth New Collegiate Dictionary* (Springfield, MA: Merriam-Webster, 1983) as "a level or undulating treeless plain that is characteristic of arctic and subarctic regions, consists of black mucky soil with a permanently frozen subsoil, and supports a dense growth of often conspicuously flowering dwarf herbs."
9. The disposition of the XIX Mountain Corps units is shown to battalion level on a map at annex 15 to Germany, Heer, 20. Heer [Headquarters, 20th German Army], *Kriegstagebuch* nr. 5 [War diary no. 5], entry for 11 September 1944, microfilm series T-312, roll 1062, frame 9264296, National Archives and Records Administration, Washington, DC, hereafter cited as Germany, 20th Army, KTB 5, and the National Archives is hereafter cited as NARA. A detailed description of the defensive positions of 2d Mountain Division is con-

- tained in that unit's records. See Germany, Heer, 2. Gebirgs-division [Germany, Army, 2d Mountain Division], Kriegestagebuch nr. 1 [War diary no. 1], microfilm series T-315, roll 109, NARA, hereafter cited as Germany, 2d Mt Div, KTB 1.
10. *Hiwi (hilfswilligen)* [volunteer auxiliary], frequently foreign nationals organized and equipped for combat service support tasks.
  11. Data for table 1 was obtained from various documents in folder 65635/14 in Germany, 20th Army, "Zustandbericht" [Status reports], 1 July–30 September 1944, microfilm series T-312, rolls 1064 and 1065, NARA. The total personnel strength figure of 56,000 is as of 1 July 1944 (frame 9266849), and the corps total weapons data is as of 13 August 1944 (frames 9266626–27). Personnel and equipment levels of corps units are from unit status reports dated 1 September 1944.
  12. DA Pam 20–271, 304.
  13. A detailed description of all strongpoints in the 2d Mountain Division's sector is in Germany, Heer, Gebirgsjagerregiment 137 [Mountain Rifle Regiment 137], "Gefechtsbericht ueber die Kampfhandlungen am 7. u. 8.10.44 im Abschnitt Isar" [Combat report of the battle action on 7 and 8 October 1944 in Sector Isar], in Germany, 2d Mt Div, KTB 1, microfilm series T-315, roll 109, NARA.
  14. Several Soviet sources describe the German defensive system in detail. See, for example, Rumiantsev, *Razgrom vruga*, 129–37. See also P. V. Terekhov, *Boevye deistviia tankov na severo-zapade v 1944g* [Combat operations of tanks in the northwest in 1944] (Moscow: Voenizdat, 1965), 113–14, hereafter cited as Terekhov, *Boevye deistviia tankov*.
  15. "Soldaten der 2. Gebirgsdivision!" [Soldiers of the 2d Mountain Division!] in Germany, 2d Mt Div, KTB 1, microfilm series T-315, roll 109, NARA, frame 000823.
  16. "Divisionsbefehl fur die Umgliederung des Unterabschnitts Isar zur Stellungenfront" [Divisional order for the reorganization of Subsector Isar into a strongpoint front], Germany, 2d Mt Div, KTB 1, microfilm series T-315, roll 109, NARA, frames 000753–62.
  17. Meretskov, *Na sluzhbe*, 343.
  18. Stalin is quoted in Meretskov, *Na sluzhbe*, 343. The date of the meeting is from Shtememko, *Soviet General Staff*, 2:372.
  19. Meretskov, *Na sluzhbe*, 351–52.
  20. Ibid., 349. For a biographical sketch of Shcherbakov, see *Sovetskaia voennaia entsiklopediia* [Soviet military encyclopedia] (Moscow: Voenizdat, 1980), 8:552; the encyclopedia is cited hereafter as *SVE*.
  21. According to Rumiantsev, *Razgrom vruga*, 142, troop units repaired or improved over sixty kilometers of road, built eighty bridges and culverts, and constructed over fifty kilometers of new road.
  22. Units that came from the Svir-Petrozavodsk Operation, which ended on 7 August, were the 127th Light Rifle Corps headquarters; the 3d, 69th, and 70th Naval Rifle Brigades; the 99th Rifle Corps headquarters; the 114th and 368th Rifle Divisions; the 20th Motorized Combat Engineer Brigade; the 275th and 284th Separate Motorized Special-Purpose Battalions (Amphibians); the 7th Guards Tank and 89th Tank Regiments; and the 339th and 378th Self-Propelled Artillery. See Terekhov, *Boevye deistviia tankov*, 87–111. The 31st Rifle Corps headquarters and the 45th, 83d, and 367th Rifle Divisions came from the 26th Army on the Kandalaksha axis, having concluded combat operations there on 27 September. See A. I. Babin, *Karel'skii front v Velikoi Otechestvennoi voine 1941–1945* [Karelian Front in the Great Patriotic War, 1941–1945] (Moscow: Izdatel'stvo "Nauka," 1984), map in chap. 8, hereafter cited as Babin, *Karel'skii front*. The 65th Rifle Division came to the Karelian Front in early 1944 from the Volkhov Front. The origin of other tank, engineer, and artillery reinforcements cannot be determined on the basis of available evidence.

23. Kh. A. Khudalov, *U kromki kontinenta* [At the edge of the continent] (Moscow: Voenizdat, 1974), 124, hereafter cited as Khudalov, *U kromki*.
24. The 72d Naval Rifle Brigade was one of twenty-five such brigades created in the fall of 1941. After its formation in the Siberian Military District, it was assigned to the Karelian Front, where it remained until January 1945. See Captain First Rank V. Shlomin, "Dvadtsat' piat' morskikh strelkovykh" [Twenty-five naval rifle], *Voenno istoricheskii zhurnal* [Military history journal], July 1970:96—99, hereafter cited as Shlomin, "Dvadtsat' piat'." The journal is hereafter cited as *VIZh*.
25. *Eto bylo na Karel'skom fronte* [It was on the Karelian Front] (Petrozavodsk: Izdatel'stvo "Karelia," 1985), 190; and Babin, *Karel'skii front*, 316.
26. Both of these brigades were also created in the fall of 1941 in the Siberian Military District. They were assigned to the 7th Separate Army of the Leningrad Front and came to the Karelian Front in 1944. The formation and activities of the 70th Naval Rifle Brigade from 1941 to 1944 are described in the memoir of a former member of the brigade staff, S. A. Pestanov, *Soldaty morskoi pekhoty* [Soldiers of the naval infantry] (Petrozavodsk: "Karelia," 1976), hereafter cited as Pestanov, *Soldaty*.
27. *Ibid.*, 96. Based on the interrogation of a prisoner, a similar description of the organization of one of these brigades is found in a German source. See Klaus Brockelmann and Hans Roschmann, "Small Unit Tactics, Combats in Taiga and Tundra," *Foreign Military Studies* no. MS P-060m (Historical Division, U.S. Army, Europe, 1952), 148—49, hereafter cited as MS P-060m.
28. Meretskov, *Na sluzhbe*, 351.
29. N. Rumiantsev, "Primenenie olen'ego transporta v 14-i armii karel'skogo fronta" [Utilization of reindeer transport in the 14th Army of the Karelian Front], *VIZh*, November 1972:90, hereafter cited as Rumiantsev, "Primenenie."
30. Babin, *Karel'skii front*, 292, n. 20.
31. Pestanov, *Soldaty*, chap. 3, describes the encirclement of the 70th Naval Rifle Brigade during the Tuloksinsk landing. His brigade had a strength of approximately 3,000 persons in October (p. 101).
32. In October 1944, the average rifle division strength in the 99th Rifle Corps was 6,350 and, in the 31st Rifle Corps, 5,860. See appendixes E and F.
33. Babin *Karel'skii front*, 316; and *Eto bylo na Karel'skom fronte*, 189.
34. Babin, *Karel'skii front*, 317.
35. *SVE*, 6:332.
36. Shtemenko, *Soviet General Staff*, 2:374; and Meretskov, *Na sluzhbe*, 371.
37. The Russian term is *ukreplennyi raion*, which is "standard troop formation, designated for the fulfillment of a defensive mission." Such a formation routinely consisted of several artillery battalions and combat support and logistic units. *SVE*, 8:185.
38. A. G. Golovko, *Vmeste s flotom* [Together with the fleet] (Moscow: Voenizdat, 1979), 224, hereafter cited as Golovko, *Vmeste*.
39. Meretskov's proposal and the 29 September order were published in Colonel I. V. Iaroshenko and Colonel L. I. Smirnova, comps., "Osvobozhdenie sovetskogo Zapoliar'ia" [Liberation of the Soviet polar region], *VIZh*, June 1985:33—36.
40. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 26. These more specific missions are further corroborated in an article by Marshal of Artillery G. Peredelskii, "Boevoe primenienie artillerii v Petsamo-Kirkenesskoi operatsii" [Combat employment of artillery in the Petsamo-Kirkenes Operation], *VIZh*, October 1984:17, hereafter cited as Peredelskii, "Primenenie artillerii."

41. This data was extracted from charts in Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 12—13 and 83—84. Translations of the charts are at appendixes E and F.
42. Ibid.; and Rumiantsev, *Razgrom vruga*, 157 n.
43. Peredelskii, "Primenenie artillerii," 17.
44. Peredelskii, "Primenenie artillerii," 17; Rumiantsev, *Razgrom vruga*, 157; and Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 27. Peredelskii, who wrote his article in 1984, probably took these figures from Rumiantsev, who wrote his study in 1963. A plausible explanation for the discrepancy between Rumiantsev and Mikulskii is that Mikulskii, the former 99th Rifle Corps commander, could have used personal notes, while Rumiantsev used archival documents.
45. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 28.
46. Ibid., 29.
47. Rumiantsev, *Razgrom vruga*, 158. The Russian is *instrumental'naia razvedka*, used with the verb *zacekat'/zacech'*, which means "to determine by intersection."
48. Peredelskii, "Primenenie artillerii," 18.
49. Rumiantsev, *Razgrom vruga*, 159—60; Peredelskii, "Primenenie artillerii," 19; and Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 42—43.
50. In the Russian, *posledovatel'noe sosredotochenie ognia*. For a detailed explanation, see A. I. Averianov, "Posledovatel'nogo sosredotochenie ognia" [Subsequent concentration of fire], *SVE*, 6:467.
51. Peredelskii, "Primenenie artillerii," 20.
52. Self-propelled guns are included in this discussion because they were used only in direct-fire roles and were always attached to tank units.
53. Meretskov, *Na sluzhbe*, 376.
54. Rumiantsev, *Razgrom vruga*, 170; and Terekhov, *Boevye deistviia tankov*, 120—21.
55. Terekhov, *Boevye deistviia tankov*, 118—19; Rumiantsev, *Razgrom vruga*, 160—61; and Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 33.
56. Colonel E. I. Maikov, "Inzhenernoe obespechenie boevykh deistvii voisk v Zapoliar'e (Petsamo-Kirkenesskaia operatsiia)" [Engineer support of the combat operations of the troops in the polar region (Petsamo-Kirkenes Operation)], a chapter in *Inzhenernye voiska Sovetskoi Armii v vazhneishikh operatsiakh Velikoi Otechestvennoi voiny* [Engineer troops of the Soviet Army in the most important operations of the Great Patriotic War], compiled by V. P. Andreev, D. S. Borisov, and A. F. Evtushenko (Moscow: Voenizdat, 1958), 178, hereafter cited as Maikov, "Inzhenernoe obespechenie." This source further defines the mission to prepare assembly areas for the army as "to provide for the concealed (*skrytnoe*) concentration of forces on the main axis."
57. Rumiantsev, *Razgrom vruga*, 161; Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 34—35, 81—82; and Colonel General A. F. Khrenov, *Mosty k pobede* [Bridges to victory] (Moscow: Voenizdat, 1982), 315, hereafter cited as Khrenov, *Mosty k pobede*. Another source indicates that the Karelian Front also reinforced 14th Army with fifteen battalions of various types of highway troops. See Colonel V. V. Ovsiannikov and Lieutenant Colonel V. V. Shmidt, "Tylovoe obespechenie 14-i armii v Petsamo-Kirkenesskoi operatsii" [Rear area support of 14th Army in the Petsamo-Kirkenes Operation], *VIZh*, October 1985:84, hereafter cited as Ovsiannikov and Shmidt, "Tylovoi obespechenie." Highway troops, by definition, include traffic control, road construction, and bridge construction units. See "Dorozhnye voiska" [Highway troops], *SVE*, 3:251—52.
58. Rumiantsev, *Razgrom vruga*, 160. Textual and photographic evidence suggests that the 275th was equipped with 2½-ton amphibious trucks, and the 284th was equipped with

- ¼-ton amphibious jeeps. See Terekhov, *Boevye deistvii tankov*, photograph on 91 and text on 92 and 104.
59. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 12.
  60. Rumiantsev, *Razgrom vraga*, 161—62; and Maikov, "Inzhenernoe obespechenie," 179.
  61. Rumiantsev, *Razgrom vraga*, 162; Maikov, "Inzhenernoe obespechenie," 182; and Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 36.
  62. Maikov, "Inzhenernoe obespechenie," 179, 181; Rumiantsev, *Razgrom vraga*, 161; and Mikulskii and Absaliyamov, *Nastupatel'nye boi*, chart on 35—36.
  63. Rumiantsev, *Razgrom vraga*, 162—63; and Maikov, "Inzhenernoe obespechenie," 181.
  64. Information pertaining to air support was compiled principally from four Soviet journal articles: Lieutenant Colonel N. Komarov, "Voiska PVO strany v Petsamo-Kirkenesskoi operatsii" [Troops of national air defense in the Petsamo-Kirkenes Operation], *VIZh*, October 1974:28—33, hereafter cited as Komarov, "Voiska PVO"; and three articles by Lieutenant Colonel I. G. Inozemtsev, "Udari po aerodromam protivnika na severnom i severo-zapadnom napravleniakh (1941—1944gg)" [Strikes against enemy airfields on the northern and northwestern axes (1941—1944)], *VIZh*, December 1974:17—24, hereafter cited as Inozemtsev, "Udari"; "Sovetskaia aviatsiia v Petsamo-Kirkenesskoi operatsii (Oktiabr 1944g)" [Soviet aviation in the Petsamo-Kirkenes Operation (October 1944)], *Istoriia SSSR* [History of the U.S.S.R.], February 1975:101—10, hereafter cited as Inozemtsev, "Sovetskaia aviatsiia"; and "Osobennosti boevogo primeneniia aviatsii v Zapoliare" [Features of combat utilization of aviation in the polar region], *VIZh*, November 1976:20—28.
  65. Inozemtsev, "Sovetskaia aviatsiia," 102.
  66. General Sokolov was born in 1900, joined the Red Army in 1918, and transferred from the cavalry to the air force in 1929. He was the chief of staff of an aviation brigade in the 1939—40 Soviet-Finnish War, then chief of staff of an aviation division of the 14th Army, and finally chief of staff of the air forces of the Karelian Front. He took command of the Karelian Front's air forces in June 1942 and, in November, the 7th Air Army. See *SVE*, 7:435.
  67. Terekhov, *Boevye deistvii tankov*, 120.
  68. Rumiantsev, *Razgrom vraga*, 165.
  69. *Ibid.*, 102; and Komarov, "Voiska PVO," 28.
  70. Information pertaining to logistic support is derived primarily from four sources: Rumiantsev, *Razgrom vraga*, 168—70; Colonel N. Maliugin, "Tyl 14-i armii v Petsamo-Kirkenesskoi operatsii" [The rear services of the 14th Army in the Petsamo-Kirkenes Operation], *VIZh*, February 1973:97—102, hereafter cited as Maliugin, "Tyl"; Colonel General (Reserve) I. Volkotrubenko, "Obespechenie voisk boepripasami v operatsii po razgromu vraga v Zapoliare" [The supplying of ammunition to the forces in the operation for the defeat of the enemy in the polar region], *VIZh*, October 1984:81—82, hereafter cited as Volkotrubenko, "Obespechenie voisk"; and Ovsiannikov and Shmidt, "Tylovoe obespechenie," 82—87.
  71. Rumiantsev, *Razgrom vraga*, 168.
  72. Maliugin, "Tyl," 97.
  73. In Russian *boevoi komplekt*, which is the estimated quantity of ammunition required per day to sustain operations for a single weapon system or unit, based on both expenditure experience and system carrying capacity. The closest NATO equivalent is "required supply rate."
  74. Maliugin, "Tyl," 99; and Ovsiannikov and Shmidt, "Tylovoe obespechenie," 85, both citing the same archival source.

75. Ibid.
76. Maliugin, "Tyl," 100, gives the number of reindeer as 532, and Ovsiannikov and Shmidt, "Tylovoe obespechenie," 85, gives 572. Load capacities for horses and reindeer are from Volkotrbenko, "Obespechenie voisk," 87. For a detailed discussion of using reindeer as draft animals in the 14th Army, see Rumiantsev, "Primenenie," 86—90.
77. Khudalov, *U kromki*, 122; and Ovsiannikov and Shmidt, "Tylovoe obespechenie," 86.
78. Maliugin, "Tyl," 102; and Ovsiannikov and Shmidt, "Tylovoe obespechenie," 87.
79. Volkotrbenko, "Obespechenie voisk," 87.
80. Rumiantsev, *Razgrom vraga*, 167. The 14th Army chief of rear services was Major General N. A. Shabanov. The identity of the Karelian Front chief of rear services is not known.
81. Meretskov, *Na sluzhbe*, 343, 354.
82. For a thorough discussion of this very complex command and control system, see "Upravlenie voiskami" [Troop control], *SVE*, 8:203—4; M. M. Kirian, ed., *Fronty nastupali: po opytu Velikoi Otechestvennoi voiny* [Fronts attacked: According to the experience of the Great Patriotic War] (Moscow: "Nauka," 1987), 178—79; and R. Portugalskii and N. Fomin, "Nekotorye voprosy sovershenstvovaniia struktury organov upravleniia fronta i armii" [Some questions about the improvement of the structure of the command and control organs of the Front and army], *VIZh*, August 1978:33—41.
83. Khrenov, *Mosty k pobede*, 236.
84. A. I. Babin, *Na volkhovskom fronte 1941—1944gg* [On the Volkhov Front, 1941—1944] (Moscow: "Nauka," 1982), 341.
85. Babin, *Karel'skii front*, 313.
86. This process is described in detail in Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 37—38.
87. Rumiantsev, *Razgrom vraga*, 171.

## Chapter 2

1. This quotation is an excerpt from Lieutenant General Degen's proclamation to the soldiers of 2d Mountain Division on 12 September 1944. See Germany, 2d Mt Div, KTB 1, microfilm series T-315, roll 109, frame 00823, NARA. A translation of the proclamation is at appendix D.
2. Terekhov, *Boevye deistviia tankov*, 121.
3. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 50.
4. Ibid., 24—25.
5. Khudalov, *U kromki*, 144. General Khudalov's 10th Guards Rifle Division was on the left flank of the 131st Rifle Corps' first echelon.
6. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 48—49.
7. Ibid., 50; and Germany, 20th Army, KTB 5, Air operations daily and morning report for 7—8 October 1944, microfilm series T-312, roll 1063, frame 9265044, NARA.
8. Khudalov, *U kromki*, 147.
9. Ibid., 151.
10. Rumiantsev, *Razgrom vraga*, 177.

11. A. Pavozkov, "Reid korpusa polkovnika solov'eva" [The raid of Colonel Solov'ev's corps], in *Eto bylo na Krainem Severe*, 208—14, hereafter cited as Pavozkov, "Reid."
12. Germany, 20th Army, KTB 5, entry for 1000, 8 October 1944, roll 1061; and Anlage 13 to 8 October entry, roll 1063, frames 9265095—96; both in microfilm series T-312, NARA.
13. Pestanov, *Soldaty*, 99.
14. Germany, 20th Army, KTB 5, entry for 1300, 8 October 1944, microfilm series T-312, roll 1061, NARA.
15. Ibid., entry for 1645, 8 October 1944. General Ferdinand Jodl was General Alfred Jodl's (of the OKW) nephew.
16. Ibid., Anlage 11 to 8 October entry, microfilm series T-312, roll 1063, frame 9265093, NARA.
17. Ibid., Anlage 13 to 8 October entry, microfilm series T-312, roll 1063, NARA.
18. Rumiantsev, *Razgrom vraga*, 178.
19. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 56—57.
20. Ibid.
21. Rumiantsev, *Razgrom vraga*, 179.
22. Long-distance conversation between the German 20th Army chief of staff, General Holter, and commander, XIX Mountain Corps. Germany, 20th Army, KTB 5, entry for 1600, 9 October 1944, microfilm series T-312, roll 1061, NARA.
23. Rumiantsev, *Razgrom vraga*, 268.
24. Ibid., 180; and Germany, 20th Army, KTB 5, Daily air operations report for 8—9 October 1944, microfilm series T-312, roll 1061, frame 9265086, NARA.
25. Germany, 20th Army, KTB 5, entries for 1145 and 1600, 9 October 1944, microfilm series T-312, roll 1061, NARA.
26. In various Soviet sources, the size of this landing force ranges from 2,751 to 3,000. For a complete description of all the amphibious landings, see chapter 5.
27. Disoriented by German searchlights and their own smoke screen, several vessels landed their troops at points other than those specified in their plans and orders, resulting in confusion that lasted until morning. See S. I. Kabanov, *Pole boiia-bereg* [The battlefield is the shore] (Moscow: Voenizdat, 1977), 297—99, hereafter cited as Kabanov, *Pole boiia*.
28. Germany, 20th Army, KTB 5, entries for 2245 and 2400, 9 October 1944, microfilm series T-312, roll 1061, NARA.
29. The German defenses along the isthmus are described in greater detail in Kabanov, *Pole boiia*, 293—95.
30. Rumiantsev, *Razgrom vraga*, 191—92; and Kabanov, *Pole boiia*, 300—302.
31. Pavozkov, "Reid," 211.
32. Pestanov, *Soldaty*, 104—05.
33. Rumiantsev, *Razgrom vraga*, 188; and Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 59.
34. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 59; and Khudalov, *U kromki*, 156.
35. Germany, 20th Army, KTB 5, entry for 1630, 9 October 1944, conversation between chiefs of staff, 20th Army and XIX Mountain Corps, microfilm series T-312, roll 1061, NARA.
36. The approach march of this division and its combat actions for 11—15 October are described in an article by Major Iu. Kuzmichev, "S marsha v boi" [From the march into battle], *VIZh*, November 1974:48—55, hereafter cited as Kuzmichev, "S marsha v boi."



37. Germany, 20th Army, KTB 5, entries for 1345 and 1600, 10 October 1944, microfilm series T-312, roll 1061, NARA.
38. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 61.
39. Ibid., 60–61; and Khudalov, *U kromki*, 160.
40. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 60; and Khudalov, *U kromki*, 159.
41. Soviet sources differ in explaining the naval infantry's failure to closely pursue the retreating German force. See Admiral of the Fleet G. Egorov, "Severnii flot v Petsamo-Kirkenesskoi operatsii" [Northern Fleet in the Petsamo-Kirkenes operation], *VIZh*, October 1974:19–26, hereafter cited as Egorov, "Severnii"; and Kabanov, *Pole boiia*, 306. The former commander of the 12th Naval Infantry Brigade neatly avoided discussing this problem in his brief memoir of the offensive. See Major General (Reserve) V. V. Rassokhin, "Ikh podvig v pamiati narodnoi" [Their feat is in the national memory], in *V boiakh-morskaia pekhota* [Naval infantry in battles], compiled by S. I. Polozov and V. P. Zagrebina (Murmansk: Knizhnoe Izdatel'stvo, 1984), 35.
42. Inozemtsev, "Sovetskaia aviatsiia," 106. Unfortunately, the German air operations report for this date could not be found to support or refute the Soviet account. In another article, Inozemtsev claims that Soviet air forces flew a total of 371 sorties against German airfields in October. Inozemtsev, "Udari," 23–24.
43. Pestanov, *Soldaty*, 106. So desperate was this unit for food that it ambushed a German supply truck and carried off the provisions.
44. Germany, 20th Army, KTB 5, entry for 0001, 12 October 1944, microfilm series T-312, roll 1061, NARA.
45. MS P-060m, 106.
46. Rumiantsev, *Razgrom vruga*, 187.
47. Pestanov, *Soldaty*, beginning on 107. It cannot be determined precisely where or when the 70th Naval Rifle Brigade reached Tarnet Road. Pestanov's memoir lacks a map, uses place names that do not appear on other maps, and does not contain any dates between 7 and 14 October. Since he personally participated in this action, however, and describes it in some detail, his account must be considered. Rumiantsev, *Razgrom vruga*, sketch 13, 184, shows the 70th Naval Rifle Brigade to the west and south of Tarnet Road on 13 and 14 October and does not mention that the 70th cut the road. This aspect of the battle needs additional research in Soviet sources not yet available.
48. Khudalov, *U kromki*, 165–66.
49. Germany, 20th Army, KTB 5, entries for 1500 and 2105, 13 October, microfilm series T-312, roll 1061, NARA.
50. Ibid., Morning report (Anlage 3) and Daily report (Anlage 1) for 14 October 1944, microfilm series T-312, roll 1061, frames 9265196, 9265202–3, NARA. Pestanov, *Soldaty*, beginning on 108, indicates that the 70th Naval Rifle Brigade of 127th Light Rifle Corps finally seized positions straddling Tarnet Road on the morning of 14 October, cutting the path of retreat. This does not agree with other Soviet accounts or with German records.
51. Rumiantsev, *Razgrom vruga*, 210. This estimate is probably low.
52. Ibid., 198.
53. Concerning German personnel losses on 7–15 October, three Soviet sources use the figure 18,000: Rumiantsev, *Razgrom vruga*, 199 ("up to 18,000 killed"); Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 78 ("18,000 killed and wounded"); and Lieutenant General (Reserve) Kh. A. Khudalov, "Petsamo-Kirkenesskaia operatsiia" [The Petsamo-Kirkenes Operation], *VIZh*, October 1969:116 ("18,000 killed") citing an archival source. The author's estimate of 6,000 is based on an analysis of XIX Mountain Corps reports and records. The after-

action reports of the 136th and 137th Mountain Rifle Regiments, 2d Mountain Division, indicate that the 2d Mountain Division suffered at least 1,858 casualties, approximately two-thirds of the division's 2,954 casualties for the whole of October. Since XIX Mountain Corps' losses for the month of October were between 8,000 and 9,000 men, the 2d Mountain Division casualty ratio of two-thirds equates to 5,300 to 6,000 casualties across the entire corps for 7–15 October. See Germany, 2d Mt Div, KTB 1, microfilm series T-315, roll 109, folder 77653, NARA. Total German casualties for the period are indicated in Message to Major Benze, OKW staff, from Operations group, Commander Nordfinnland, no. 1494/44, dated 8 November 1944, in Germany, 20th Army, KTB 5, microfilm series T-312, roll 1063, frame 9265810, NARA.

## Chapter 3

1. Germany, 20th Army, KTB 5, entries for 15 and 16 October, microfilm series T-312, roll 1061, NARA. Ziemke discusses the 15 October meeting in DA Pam 20-271, 306–7.
2. Maliugin, "Tyl," 101; and Rumiantsev, *Razgrom vraga*, 207.
3. Location and missions of Soviet units are discussed in Rumiantsev, *Razgrom vraga*, 201–2; and Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 79, 89.
4. Several Norwegian civilians interviewed by the author during a field research trip to the Kirkenes area in October 1987 both heard and saw "Stalin's organs" between Tarnet and Kirkenes during 22–25 October.
5. Rumiantsev, *Razgrom vraga*, 207.
6. Meretskov, *Na sluzhbe*, 380. As justification for crossing the Norwegian border, the Soviets cite an agreement signed with the Norwegian government in exile in London on 16 May 1944. See Admiral V. Alekseev, "Severnii flot v osvobozhdenii sovetskogo Zapoliaria i severnoi Norvegii" [The Northern Fleet in the liberation of the Soviet polar region and northern Norway], *Morskoi Sbornik* [Naval proceedings], No. 10—1974:65, hereafter cited as Alekseev, "Severnii." A text of the agreement is contained in *Vneshniaia politika Sovetskogo Soiuza v period Otechestvennoi Voiny* [Foreign policy of the Soviet Union during the Patriotic War] (Moscow: Politizdat, 1946), 2:135.
7. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 82.
8. The tank regiment had sixteen operational vehicles, with three being repaired at unit level. The self-propelled artillery regiment had only four operational systems, with three being repaired at unit level and ten at Front level. *Ibid.*, chart on 85.
9. *Ibid.*, 82.
10. Rumiantsev, *Razgrom vraga*, 204; and Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 79.
11. Rumiantsev, *Razgrom vraga*, 205.
12. Kare Kristensen, interview with author, Elvenes, Norway, 15 October 1987. A second, unnamed civilian verified this in an interview at his home on Jar Fjord, 16 October 1987.
13. The degree of coordination between the 368th Rifle Division and naval infantry units cannot be ascertained from available Soviet sources. The source that was most likely to address this important issue, but did not, is the history of 368th Rifle Division. See *Ot Tiumeni do Kirkenesa* [From Tiumen to Kirkenes] (Sverdlovsk: Sverdlovsk-Uralskoe knizhoe izdatel'stvo, 1976), the section beginning on 167.
14. Actions of the 99th Rifle Corps are described in Rumiantsev, *Razgrom vraga*, 207–16; and Khudalov, *U kromki*, 174–77.
15. Rumiantsev, *Razgrom vraga*, 212.

16. Rumiantsev, *Razgrom vruga*, 215. The 284th Separate Motorized Special-Purpose Battalion (*otdelnyi motorizovannyi batalon osobogo naznacheniia*) was equipped with ninety-four American-made Ford amphibious jeeps. See Mikuskii and Absaliyamov, *Nastupatel'nye boi*, chart on 13 (284 *ombon*); and Kh. A. Khudalov, "Na glavnom napravlenii" [On the main axis], in *Cherez fiordy* [Through the fjords], compiled by V. G. Korshunov (Moscow: Voenizdat, 1969), 82, hereafter cited as Khudalov, "Na glavnom napravlenii"; the book is hereafter cited as *Cherez fiordy*.
17. Rumiantsev, *Razgrom vruga*, 215–16. During a field research trip in October 1987, the author visited this bridge site on the Norwegian side. Soviet metal engineer stakes are still visible in the water at the exit point. On the Soviet side, the road break in the tree line can be seen.
18. Rumiantsev, *Razgrom vruga*, 202.
19. Ibid. During phase two of the offensive, the 126th Light Rifle Corps had little contact until it approached Lake Klistervatn. Rumiantsev gives the 126th a sentence on page 209 and a paragraph on page 214. See also General Ferdinand Jodl, "Kursbericht ueber die Kampfhandlungen im Petsamo und Varangerraum" [A short report regarding the combat actions in Petsamo and Varanger area], 5 November 1944, microfilm series T-312, roll 1069, item 75034/1, NARA, hereafter cited as Jodl, "Kursbericht."
20. Mikuskii and Absaliyamov, *Nastupatel'nye boi*, table 10 on 90.
21. Ibid., 87.
22. Ibid., 96.
23. Rumiantsev, *Razgrom vruga*, 209; and Mikuskii and Absaliyamov, *Nastupatel'nye boi*, 99–100.
24. Pestanov, *Soldaty*, beginning on 111.
25. Mikuskii and Absaliyamov, *Nastupatel'nye boi*, 102–3.
26. Ibid., 146.
27. Ibid., 104–5.
28. The three Soviet accounts of this action are contradictory. Absaliyamov asserts in his 1959 account that the withdrawing Germans pushed aside the 127th Light Rifle Corps units blocking the road, and his accompanying map also indicates this. Mikuskii and Absaliyamov, *Nastupatel'nye boi*, 119. Rumiantsev, on the other hand, writing in 1963 and citing an archival source, contends that the 127th LRC unit was not astride Arctic Ocean Highway at all but had occupied a sector of the road between Nikel and the airfield. Rumiantsev, *Razgrom vruga*, 217. Pestanov, who was with the 70th Naval Rifle Brigade, vaguely describes small-unit actions southwest of Nikel, indicating that the "3d Battalion reached the road, but met strong enemy fire, and went to ground." Pestanov, *Soldaty*, 119. German war diary entries support the Absaliyamov account. See Germany, 20th Army, KTB 5, entries for 20 and 21 October 1944, microfilm series T-312, roll 1061, NARA. Narrative and map notations are also contained in Germany, 2d Mt Div, KTB 1, "Gefechtsberecht ueber das Gefecht am 20. und 21.10.1944 sudlich der Kolosjokibrucke" [Action report for the action on 20–21 October 1944 south of Kolosjoki bridge], 15 December 1944, frames 1044–54, microfilm series T-315, NARA. For a detailed description of the German counterattack conducted on the morning of 21 October, see MS P-060m, 131–48. This account was written several years after the war.
29. Rumiantsev, *Razgrom vruga*, 212; and Mikuskii and Absaliyamov, *Nastupatel'nye boi*, 106.
30. Rumiantsev, *Razgrom vruga*, 214.
31. MS P-060m, 134.
32. Ibid., 150.

## Chapter 4

1. Rumiantsev, *Razgrom vraga*, 219; and V. I. Shcherbakov, "Nastuplenie" [The offensive], 60, in *Cherez fiordy*.
2. Rumiantsev, *Razgrom vraga*, 222. This unusually heavy ammunition expenditure is explained in part by the fact that Kirkenes was the supply base for the region, and anything not consumed or destroyed would fall into Soviet hands. The Germans, realizing this, probably chose to fire it at targets rather than destroy it.
3. Major General Khudalov writes in *U kromki*, 185, that Lieutenant General Shcherbakov gave him this order by radio at 1600, 24 October. His corps commander, Lieutenant General Mikulskii, appeared at the division command post fifteen to twenty minutes later with additional guidance for the regiment.
4. *Ibid.*, 190.
5. The entry of KV heavy tanks into Kirkenes is described by V. Arshinevskii, former commander of the tank regiment, in "Tiazhelye tanki v zapoliar'e" [Heavy tanks in the polar region], in *Eto bylo na krainem severe*, 225—30.
6. Khudalov, *U kromki*, 187; and Ella Mathisen, interview with author, Munkelv, Norway, 17 October 1987.
7. Khudalov, *U kromki*, 187.
8. Unnamed Norwegian civilian, interview with author, Neiden, Norway, 17 October 1987.
9. Meretskov, *Na sluzhbe*, 381—82.
10. Rumiantsev, *Razgrom vraga*, 226.
11. Mikulskii and Absaliarov, *Nastupatel'nye boi*, 125.
12. *Ibid.*, 127.
13. *Ibid.*, 120; Terekhov, *Boevye deistviia tankov*, 130; and Rumiantsev, *Razgrom vraga*, 223.
14. Pestanov, *Soldaty*, 121.
15. Rumiantsev, *Razgrom vraga*, 233; and Mikulskii and Absaliarov, *Nastupatel'nye boi*, 129.
16. The battle fought here is described in detail by the former chief of operations, 163d Infantry Division, in MS P-060m, 112—17, and by Major General Absaliarov in Mikulskii and Absaliarov, *Nastupatel'nye boi*, 130—34. These two accounts coincide in all significant details of the combat but differ on the unit designation of the German defenders.
17. Mikulskii and Absaliarov, *Nastupatel'nye boi*, 134.
18. Rumiantsev, *Razgrom vraga*, 236. Pestanov, *Soldaty*, beginning on 123, indicates that the 127th Light Rifle Corps crossed into Norway in approximately twenty boats manned by Norwegian civilians on an unspecified date. In the following several pages, he mentions the corps encountering two prisoner-of-war camps, one for Soviet military personnel and the other for civilians, but no combat actions. The corps recrossed the Norwegian-Finnish border and advanced as far as Nautsi.
19. Ole Sotkajervi, interview with author, Stenbakk, Norway, 18 October 1987. According to this source, "hundreds and hundreds" of Russian soldiers crossed the Pasvik River at Stenbakk early on the morning of 25 October 1944 on log rafts. The Germans in the area had fled southward three to four hours before the Soviets arrived. The local Finnish farmers gave these soldiers, who were described as "starving teen-age boys," fresh meat from recently slaughtered cattle.
20. *Ibid.* Local inhabitants interviewed recalled the flooding downstream that resulted from the destruction of the dam.

21. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 140.
22. See MS P-060m, 117—21, for a description of this action from the German perspective. See also Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 141—42.
23. Meretskov, *Na sluzhbe*, 382. During the Great Patriotic War, artillery salutes were fired in Moscow in honor of Soviet forces that had achieved a significant victory at the front. The first such salute was fired on 5 August 1943 in recognition of the liberation of the cities of Orel and Belgorod. By war's end, 354 ceremonial salutes had been fired. See *SVE*, 7:219.

## Chapter 5

1. I. A. Kozlov and V. S. Shlomin, *Krasnoznamennyi severnyi flot* [Red Banner Northern Fleet] (Moscow: Voenizdat, 1983), 70, hereafter cited as Kozlov and Shlomin, *Krasnoznamennyi*. The development and growth of Soviet naval power in the Barents Sea area accompanied the rapid economic development of the entire Kola Peninsula infrastructure during the 1930s. Murmansk, for example, grew from a population of 10,000 in 1930 to 119,000 by 1939.
2. Golovko's memoir, *Vmeste*, which recently was published in English by Progress Publishers, begins with his fleet command appointment in 1940. For a brief biographical sketch, see *SVE*, 2:592.
3. In June 1941, when Germany attacked the U.S.S.R., the ages of the Soviet fleet commanders were Golovko (Northern)—34, Tributz (Baltic)—41, Oktiabrskii (Black Sea)—42, and Iumashev (Pacific)—46.
4. Kozlov and Shlomin, *Krasnoznamennyi*, 84.
5. *Ibid.*, 88.
6. *Ibid.*, 154—55.
7. In 1944, through lend-lease, the Northern Fleet received three minesweepers, fifteen large subchasers, thirty-one small subchasers, and forty-four patrol torpedo boats. B. A. Vainer, *Severnyi flot v Velikoi Otechestvennoi voine* [The Northern Fleet in the Great Patriotic War] (Moscow: Voenizdat, 1964), 206, cited in V. Konavalov, "Iz opyta popolneniia sostava severnogo flota v gody velikoi otechestvennoi voiny" [From the experience of the replenishment of the complement of the Northern Fleet during the Great Patriotic War], *VIZh*, August 1978:109. The patrol torpedo boats were of the British Vosper design, built in Annapolis, Maryland, and Bristol, Rhode Island. See Robert J. Bulkley, *At Close Quarters: PT Boats in the U.S. Navy* (Washington, DC: U.S. Government Printing Office, 1962), 484.
8. Alekseev, "Severnyi," 63.
9. Kozlov and Shlomin, *Krasnoznamennyi*, 183.
10. *Ibid.*, 156.
11. Admiral of the Fleet G. Egorov, "Sovershenstvovanie upravleniia silami VMF v pervom periode voiny" [The improvement of command and control of forces of the Navy in the first period of the war], *VIZh*, May 1979:26. The term used in Russian is *operativnoe podchinenie* (operational subordination).
12. Discussed in G. Egorov, "Sovershenstvovanie upravleniia silami VMF vo vtoroi i tret'em periodakh voiny" [The improvement of command and control of forces of the Navy in the second and third periods of the war], *VIZh*, January 1980:21.
13. *Ibid.*, 22. See also L. I. Olshtynskii, *Vzaimodeistvie armii i flota* [Cooperation of army and fleet] (Moscow: Voenizdat, 1983), chap. 6, hereafter cited as Olshtynskii, *Vzaimodeistvie*.

14. Meretskov, *Na sluzhbe*, 350.
15. Admiral N. G. Kuznetsov, *Kursom k pobede* [The course to victory] (Moscow: Voenizdat, 1976), 422, hereafter cited as Kuznetsov, *Kursom*.
16. Some of the evidence is linguistic; for example, the frequent use of the Russian word *vzaimodeistvie* (mutual action, cooperation, coordination) and the total absence of the term *podchinenie* (subordination) in passages pertaining to the command relationship. Other evidence is more direct. See, for example, Meretskov's Front order of 29 September (appendix A). In it, he orders (*prikazyvaiu*) the 14th Army units but not the naval infantry. See also Olshtynskii, *Vzaimodestvie*, 195.
17. Admiral V. N. Platonov, "Pravoflangovye" [The men on the right flank], a chapter in *Cherez fiordy*, 103, hereafter cited as Platonov, "Pravoflangovyi."
18. Kuznetsov, *Kursom*, 422.
19. Golovko, *Vmeste*, 224.
20. Vice Admiral A. V. Kuzmin, *V pribrezhnykh vodakh* [In coastal waters] (Moscow: Voenizdat, 1967), 179–80, hereafter cited as Kuzmin, *V pribrezhnykh vodakh*. Kuzmin was commander of Golovko's patrol torpedo brigade and was invited to this meeting.
21. This meeting is described in Golovko, *Vmeste*, 227; and Meretskov, *Na sluzhbe*, 374.
22. *Ibid*.
23. Golovko uses the Russian term *tsirkuliarnoe ukazanie* (circular directive). See *Vmeste*, 227. Kuznetsov, however, carefully describes the dispatch (*depesha*) and the wording of it in light of the command relationship between Golovko and Meretskov. See *Kursom*, 423.
24. Captain First Rank (Reserve) A. Alekseev and Captain Second Rank Engineer (Reserve) M. Kariagin, "Navigatsionno-gidrograficheskoe obespechenie Petsamo-Kirkenesskoi nastupatel'noi operatsii" [Navigational-hydrographic support of the Petsamo-Kirkenes offensive operation], *Morskoii Sbornik* [Naval proceedings], No. 5—1980:22–27; and Captain First Rank (Reserve) A. P. Aristov, "Navigatsionno-gidrograficheskoe obespechenie boevykh deistvii sil flota v Arkticheskom basseine" [Navigational-hydrographic support of combat operations of forces of the fleet in the arctic basin], *VIZh*, April 1987:44–51.
25. Golovko, *Vmeste*, 231.
26. Colonel I. I. Kartavtsev, "Morskaia pekhota v boiakh za osvobozhdenie sovetskogo Zapoliar'ia" [Naval infantry in battles for the liberation of the Soviet polar region], *VIZh*, March 1985:83, hereafter cited as Kartavtsev, "Morskaia pekhota."
27. Germany, 20th Army, KTB 5, entry for 2330, 9 October 1944, microfilm series T-312, roll 1061, NARA.
28. The gathering up of this force is described in Kabanov, *Pole boia*, 308.
29. The Liinakhamari landings are described in detail in the booklet by K. F. Fokeev, *Desant v Liinakhamari* [Assault on Liinakhamari] (Moscow: Voenizdat, 1968), hereafter cited as Fokeev, *Desant*; in Kuzmin, *V pribrezhnykh vodakh*, 197–213; and in a recent article by L. Verkhogliad, "Brosok na Petsamo" [The rush at Petsamo], *Voennyi vestnik* [Military herald], November, 1988:13–15.
30. Rumiantsev, *Razgrom vruga*, 230, indicates that this hydroelectric station had an output of 30,000 kilowatts and that it was captured intact on 24 October. In an interview with the author at the site on 16 October 1987, the station operator indicated that the single turbine had a maximum output of 3,000 kilowatts. Alekseev, "Severnyi," 66, citing an archival source, indicates that this power station was captured on 22 October. Ziemke, in DA Pam 20—271, 308, makes reference to a hydroelectric station at Tarnet. This station, which is no longer functional, by external appearances is three to four times larger than the Kobbholm Fjord station, but it is not referred to in any Soviet sources.

31. Platonov, "Pravoflangovyi," 101, 107.
32. "... podgotovlennaiia nami vysadka v Varde i Vadse podderzhki v Moskve ne nashla" (... the landing prepared by us in Vardo and Vadso did not find support in Moscow). Ibid., 197.
33. The single source for information on this landing is V. N. Leonov. He referred to it briefly in his memoir *Litsom k litsu* [Face to face] (Moscow: Voenizdat, 1957), 128–31, hereafter cited as Leonov, *Litsom*, and provided a few more details in his chapter "Vperedsmotriashchie" [The lookouts], in *Cherez fiordy*, 174–78, hereafter cited as Leonov, "Vperedsmotriashchie."
34. Inozemtsev, "Sovetskaia aviatsiia," 102.
35. Ibid., 103.
36. Rumiantsev, *Razgrom vruga*, 195; and Kartavtsev, "Morskaia pekhota," 85.
37. Inozemtsev, "Sovetskaia aviatsiia," 109.
38. Egorov, "Severnyi," 24; Golovko, *Vmeste*, 229; Captain First Rank V. Shlomin, "Boevye deistviia Severnogo Flota v 1944 gody" [Combat operations of the Northern Fleet in 1944], *Morskoi Sbornik* [Naval proceedings], No. 9—1974:11; and A. V. Basov, *Flot v Velikoi Otechestvennoi voine 1941—1945: opyt operativno-strategicheskogo primeneniia* [The fleet in the Great Patriotic War, 1941—1945: The experience of operational-strategic utilization] (Moscow: Nauka, 1980), 175.

## Chapter 6

1. Meretskov briefly mentions these detachments, calling them "not simple scouts, but detachments of sappers." See *Na sluzhbe*, 376. Their designation as special-purpose detachments (*otriadov spetsialnogo naznacheniiia*) comes from Major General D. S. Krutskikh in "Udary po tylam" [Strikes in the rear area], in *Eto bylo na krainem severe*, 203, hereafter cited as Krutskikh, "Udary po tylam." Lieutenant Colonel Krutskikh, an engineer officer on the Karelian Front engineer staff in 1944, was responsible for training the detachments. G. Emelianov calls them "detachments of sappers-demolitions men" in "V glubokom tylu vruga" [In the deep enemy rear area], *VIZh*, October 1974:55–59, hereafter cited as Emelianov, "V glubokom tylu." Colonel General A. F. Khrenov, who in 1944 was Karelian Front chief of engineer troops and Krutskikh's superior, uses "sappers of reconnaissance-diversionary detachments" in his memoir, *Mosty k pobede*, 318.
2. Krutskikh, "Udary po tylam," 203. The 6th Guards Battalion of Demolition Specialists was a far from ordinary engineer unit. According to a recently published history of Soviet engineer troops, each Front had such a battalion by October 1942. See S. Kh. Aganov, ed., *Inzhenernye voiska Sovetskoi Armii 1918—1945* [Engineer troops of the Soviet Army, 1918—1945] (Moscow: Voenizdat, 1985), 459–63. According to this source, all guards demolition specialists battalions were specially trained and equipped for reconnaissance and diversionary actions in German rear areas.
3. Khrenov, *Mosty k pobede*, 319.
4. Emelianov, "V glubokom tylu," 55.
5. Khrenov, *Mosty k pobede*, 317.
6. Ibid., 320.
7. The detailed descriptions that follow come from Krutskikh, "Udary po tylam," 204–5; Emelianov, "V glubokom tylu," 56–59; and Khrenov, *Mosty k pobede*, 319–37. (Beginning on 320, Khrenov quotes from written recollections of Guards Major A. F. Popov, who commanded the 6th Separate Guards Battalion of Demolition Specialists in the operation.)

8. Germany, 2d Mt Div, KTB 1, "Gebirgsjagerregiment 137, Gefechtsbericht ueber die Kampfhandlungen am 7.u.8.10.44 im Abschnitt Isar" [Mountain rifle regiment 137, action report on the defensive battle on 7 and 8 October 1944 in the Isar sector], microfilm series T-315, roll 109, frame 1089, NARA.
9. Germany, 20th Army, KTB 5, Anlage 4, Morning report, to the entry of 8 October 1944, microfilm series T-312, roll 1063, NARA.
10. Germany, 20th Army, KTB 5, Anlage 1, Daily report, to the entry of 10 October 1944, microfilm series T-312, roll 1063, NARA.
11. Krutskikh, "Udary po tylam," 206.
12. Jodl, "Kursbericht," entry for 13 October.
13. Emelianov, "V glubokom tylu," 59.
14. Khrenov, *Mosty k pobede*, 324.
15. Meretskov, *Na sluzhbe*, 376.
16. Golovko, *Vmeste*, 227; and Kuznetsov, *Kursom*, 423.
17. Barchenko-Emelianov finished a brief memoir shortly before his death in January 1984, *Frontovye budnyi Rybach'ego* [Days at the front on the Rybachii Peninsula] (Murmansk: Knizhnoe Izdatel'stvo, 1984), hereafter cited as Barchenko-Emelianov, *Frontovye*.
18. The best Soviet accounts of the early history and combat actions of this detachment are by M. A. Babikov, *Letom sorok pervogo* [The summer of forty-one] (Moscow: "Sovetskaia Rossiia," 1980) and *Otriad osobogo naznacheniiia* [Special-purpose detachment] (Moscow: "Sovetskaia Rossiia," 1986). An analysis of these accounts in English appears in William H. Burgess III, ed., *Inside Spetsnaz: Soviet Special Operations* (Novato, CA: Presidio Press, 1989).
19. Leonov's memoir does not give specific dates for these events; they are estimates based on textual analysis. See Leonov, *Litsom*.
20. Four eyewitness accounts have been used to reconstruct the events of the raid: Barchenko-Emelianov, *Frontovye*, 138–54; Leonov, *Litsom*, 106–26; Leonov, "Vperedsmotriashchie"; and A. N. Sintsov, "Shturm Krestovogo" [The storming of Krestovyi], in *Eto bylo na krainem severe*, 215–21, hereafter cited as Sintsov, "Shturm." Sintsov was an officer in Barchenko-Emelianov's detachment. Another detailed but secondary source is Fokeev, *Desant*, 20–34.
21. Leonov, "Vperedsmotriashchie," 172; and Sintsov, "Shturm," 218.
22. Leonov, "Vperedsmotriashchie," 173; and Sintsov, "Shturm," 219.
23. Germany, 20th Army, KTB 5, Anlage 2, Daily report, to the entry of 12 October 1944, microfilm series T-312, roll 1063, frame 9265168, NARA. See also Leonov, "Vperedsmotriashchie," 174; Sintsov, "Shturm," 220; and Barchenko-Emelianov, *Frontovye*, 146.
24. Golovko, *Vmeste*, 235. Also see Inozemtsev, "Sovetskaia aviatsiia," 107; and P. I. Khokhlov, *Nad tremia moriami* [Over three seas] (Leningrad: Lenizdat, 1988), 223.
25. Barchenko-Emelianov, *Frontovye*, 147, provides the most details on this point. Leonov, "Vperedsmotriashchie," 174, gives the time of the counterattack as dawn on 13 October.
26. Golovko, *Vmeste*, 236; Platonov, "Pravoflangovye," 106; and Egorov, "Severnyi," 23. German war diary entries corroborate the fact that, at night on 12 October, an enemy force under cover of fog and low visibility made a surprise landing in the harbor at Liinakhamari and occupied the port and town. See Germany, 20th Army, KTB 5, Anlage 4, Morning report, to the entry of 13 October 1944, microfilm series T-312, roll 1063, frame 9265184, NARA.



27. See, for example, Golovko, *Vmeste*, 234–37.

## Chapter 7

1. Meretskov, *Na sluzhbe*, 366.
2. It is difficult to know what STAVKA really knew about German intentions, since all that is available are secondary accounts, such as Shtemenko, *Soviet General Staff*, 2:392–97.
3. Rumiantsev, *Razgrom vraga*, 256.
4. K. Meretskov, “Razgrom vruga v Zapoliar’e” [The defeat of the enemy in the polar region], a book review published in *VIZh*, September 1963:86–88.
5. The article that prompted the discussion was Major General V. V. Gurkin and Lieutenant General (Reserve) M. I. Golovnin, “K voprosy o strategicheskikh operatsiakh Velikoi Otechestvennoi voyny 1941–1945gg” [To the question about strategic operations of the Great Patriotic War, 1941–1945], *VIZh*, October 1985:10–23. This article contained a list of fifty-two operations, with an invitation by the editors to the readers to discuss the criteria for naming operations to the list. Follow-up discussion articles were published in April, May, and July 1986, but substantive issues on Petsamo-Kirkenes were not discussed again until the concluding and summarizing article, “Itogi diskussii o strategicheskikh operatsiakh Velikoi Otechestvennoi voyny 1941–1945gg” [Results of the discussions about strategic operations of the Great Patriotic War, 1941–1945], *VIZh*, October 1987:8–24.
6. *Ibid.*, 12.
7. Rumiantsev, *Razgrom vruga*, 257.
8. *Ibid.*, 257–58. See also Mikulskii and Absaliyamov, *Nastupatel’nye boi*, 72.
9. Mikulskii and Absaliyamov, *Nastupatel’nye boi*, 70.
10. This command change was discovered by careful examination of tabular data in *Eto bylo na Karel’skom fronte*, 187; and Babin, *Karel’skii front*, 316.
11. Major General Alekseev’s replacement was Major General F. F. Korotkov, who went on to command the 132d Rifle Corps and became the Soviet military commandant of the Danish island Bornholm. See A. Basov, “Desant na ostrov Bornkhol’m” [Assault on Bornholm Island], *VIZh*, May 1966:27–39, hereafter cited as Basov, “Desant.”
12. Rumiantsev, *Razgrom vruga*, 274. See also Lieutenant General V. Lobov, “Boevye deistviia v Zapoliar’e” [Combat operations in the polar region], *Voennyi vestnik* [Military herald], No. 7—1984:18.
13. Rumiantsev, *Razgrom vruga*, 259.
14. *Ibid.* See also Khudalov, *U kromki*, 188. He suggests that helicopters and parachute troops will be used to perform a mission like that assigned to the 126th Light Rifle Corps in the third phase of the operation.
15. Mikulskii and Absaliyamov, *Nastupatel’nye boi*, 50, 70.
16. *Ibid.*, 74.
17. *Ibid.*, 70, 151.
18. Khrenov, *Mosty k pobede*, 316.
19. Mikulskii and Absaliyamov, *Nastupatel’nye boi*, 71.
20. *Ibid.*, 35.
21. *Ibid.*, 70.

22. Ibid., 150.
23. Rumiantsev, *Razgrom vraga*, 267—68.
24. Ibid., 268.
25. Inozemtsev, "Sovetskaia aviatsiia," 109; Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 151; and Rumiantsev, *Razgrom vraga*, 212.
26. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 74; and Rumiantsev, *Razgrom vraga*, 270.
27. Rumiantsev, *Razgrom vraga*, 212.
28. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 151.
29. Rumiantsev, *Razgrom vraga*, 264—65.
30. Mikulskii and Absaliyamov, *Nastupatel'nye boi*, 82.
31. Maliugin, "Tyl," 101.
32. Rumiantsev, *Razgrom vraga*, 275—76. One wonders what happened to the other 30 percent.
33. Ibid., 260.
34. German losses include the total for XIX Mountain Corps and the 163d Infantry Division (Battle Group Ruebel) of the XXXVI Corps. See Germany, 20th Army, KTB 5, microfilm series T-312, roll 1063, frame 9265810, for the XIX Mountain Corps, and roll 1065, frame 9268200, for the 163d Infantry Division. The Soviet casualty figure of 15,773 appears in the official Semiriaga, ed., *Istoriia*, 9:152. The casualty rate for both sides was thus approximately 16 percent.

## Epilogue

1. I. Shinkarev, comp., "Sovetskaia pomoshch' norvezhskomy narody (1944—1945gg)" [Soviet assistance to the Norwegian people (1944—1945)], *VIZh*, October 1979:32.
2. Khrenov, *Mosty k pobede*, 336—39, 342—44.
3. A. A. Grechko, *Cherez Karpaty* [Through the Carpathians] (Moscow: Voenizdat, 1972), 472.
4. Pestanov, *Soldaty*, 158.
5. Albert Z. Conner and Robert G. Poirier, *Red Army Order of Battle in the Great Patriotic War* (Novato, CA: Presidio Press, 1985), 43, 212, 254, 266—67, 287.
6. The commander of this corps was Major General F. F. Korotkov, who commanded the 14th Rifle Division, 131st Rifle Corps, from 1 September 1943 to 18 October 1944. He took command of 131st Rifle Corps on the eve of the assault on Kirkenes on 24 October and held it until 4 November 1944 when he took command of 132d Rifle Corps. For a Soviet description of the Bornholm landing, see Basov, "Desant," 27—39.
7. The best description of Leonov's activities in the Pacific theater are contained in M. A. Babikov, *Na vostochnom beregy* [On the eastern shore] (Moscow: Izdatel'stvo "Sovetskaia Rossiia," 1969).
8. *Voennyi entsiklopedicheskii slovar'* [Military encyclopedic dictionary] (Moscow: Voenizdat, 1986) 386.
9. Khrenov, *Mosty k pobede*, 291 n.
10. Peredelskii, "Primenenie artillerii," 17.

11. *Voennyi entsiklopedicheskii slovar'*, 690.
  12. *SVE*, 5:247.
  13. *SVE*, 2:592.
  14. *SVE*, 8:552.
  15. Tomas Ries and Johnny Skorve, *Investigating Kola: A Study in Military Bases Using Satellite Photography* (London: Brassey's Defence Publishers, 1986) 49, 52.
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